Purdue University Weed Science

Acuron vs. new competitors

Trial ID: 22S-TPAC-CORN-03 Cooperator Trial ID:
Protocol ID: 22S-TPAC-CORN-03 Location: TPAC Trial Year: 2022
Project ID: H006BIAD-2022US Project ID 2: Project ID 3:
Study Director: Dr. Bill Johnson Sponsor Contact: Chad Threewits - Syngenta
Investigator (Creator): Dr. Bill Johnson

General Trial Information
Study Director: Dr. Bill Johnson **Title:** Professor
Investigator: Dr. Bill Johnson **Title:** Professor

Discipline: H herbicide
Status: E established
ARM Trial Created On: Apr-11-2022
Initiation Date: May-12-2022

Trial Location
City: Lafayette **Country:** USA United States
State/Prov.: Indiana
Postal Code: 47907

Latitude of LL Corner °: 40.29177 N
Longitude of LL Corner °: -86.90687 W

Conducted Under GLP: No
Conducted Under GEP: No

Contacts
Role: STYDIR study director
Study Director: Dr. Bill Johnson **Title:** Professor
Organization: Purdue University
Address 1: 915 W. State Street
Country: USA United States **E-mail:** wgj@purdue.edu
City: West Lafayette **State/Prov:** IN **Postal Code:** 47907

Role: INVEST investigator
Investigator: Dr. Bill Johnson **Title:** Professor
Organization: Purdue University
Address 1: 915 W. State Street
Country: USA United States **E-mail:** wgj@purdue.edu
City: West Lafayette **State/Prov:** IN **Postal Code:** 47907

Role: SPONSR sponsor
Sponsor: Chad Threewits - Syngenta

Role: COOPER cooperator
Cooperator: Jay Young **Title:** Superintendent
Organization: Purdue University
Address 1: 8343 US 231 S **Phone No.:** 765-538-3422
Fax No.: 765-538-3423
Country: USA United States **E-mail:** jayyoung@purdue.edu
City: Lafayette **State/Prov:** IN **Postal Code:** 47909

Crop Description
Crop 1: C ZEAMX Zea mays Corn **BBCH Scale:** BCOR
Entry Date: Jun-17-2022 **Stage Scale:** BBCH
Variety: DKC 56-65
Attributes: Glyphosate-R and Glufosinate-R
Planting Date: May-12-2022 **Planting Rate:** 32000 S/A
Depth: 1.75 IN
Rows per Plot: 4 **Planting Method:** PLANTD planted
Row Spacing: 30 IN **Planting Equipment:** PP plot planter
Soil Temperature: 80 F **Soil Moisture:** NORMAL normal, adequate
Emergence Date: May-19-2022
Harvested Width: 5 FT
% Standard Moisture: 15.5 **Harvested Length:** 27 FT

Pest Description
Pest 1 Type: W **Code:** AMBTR Ambrosia trifida **Entry Date:** Jun-17-2022
Common Name: Giant ragweed **Stage Scale:** BBCH
Attributes: ALS-R

Pest 2 Type: W **Code:** ECHCG Echinochloa crus-galli **Entry Date:** Jun-17-2022
Common Name: Common barnyard grass **Stage Scale:** BBCH
Attributes: Herbicide susceptible

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Site and Design

Treated Plot Width: 10 FT
Treated Plot Length: 30 FT
Treated Plot Area: 300.0 FT2
Replications: 4 **Treatments:** 7 **Plots:** 28
Site Type: FIELD field
Experimental Unit: 1 PLOT plot
Tillage Type: CONTIL conventional-till
Study Design: RACOBL Randomized Complete Block (RCB)

Field Prep./Maintenance:
180 lbs of N applied as Anhydrous Ammonia on 11/23/21

Soil Description

Description Name: TPAC- Field 4AW
% Sand: 17 **% OM:** 3.1 **Texture:** SIL silt loam
% Silt: 56 **Soil Name:** Toronto-Millbrook
% Clay: 27 **Fert. Level:** G good
pH: 6.2 **CEC:** 11.5

Weather Conditions

Overall Moisture Conditions: WEDRDR wet-dry-dry
Weather Station Name: TPAC **Distance:** 0.5 MI

No.	Date	Moisture Total	Unit	Min Temp	Max Temp	Avg Temp	Temp Unit
1.	May-1-2022	0	IN	51.1	63.7	55.8	F
2.	May-2-2022	0	IN	43.2	66	55.4	F
3.	May-3-2022	0.71	IN	46	67.8	57.4	F
4.	May-4-2022	0	IN	46	61.5	53.6	F
5.	May-5-2022	0.66	IN	53.6	56.7	54.7	F
6.	May-6-2022	0.07	IN	51.8	57.2	55.2	F
7.	May-7-2022	0	IN	48.7	68.2	58.1	F
8.	May-8-2022	0	IN	44.6	68.7	58.5	F
9.	May-9-2022	0	IN	52.9	81	67.5	F
10.	May-10-2022	0	IN	66.6	88.9	76.6	F
11.	May-11-2022	0	IN	73	92.3	81.5	F
12.	May-12-2022	0	IN	67.8	90	78.1	F
13.	May-13-2022	0	IN	61.9	89.6	76.8	F
14.	May-14-2022	0.74	IN	59.7	88.2	70.7	F
15.	May-15-2022	1.02	IN	57	86.2	67.6	F
16.	May-16-2022	0.01	IN	52.7	76.8	64.6	F
17.	May-17-2022	0	IN	53.4	77.7	66	F
18.	May-18-2022	0.1	IN	57.9	66.9	62.8	F
19.	May-19-2022	0	IN	59.7	82.2	69.6	F
20.	May-20-2022	0	IN	66.4	86.9	77.2	F
21.	May-21-2022	0.1	IN	58.3	77.7	66.7	F
22.	May-22-2022	0	IN	53.2	64.6	58.3	F
23.	May-23-2022	0	IN	48.4	68.7	58.3	F
24.	May-24-2022	0	IN	50.2	75.6	63.7	F
25.	May-25-2022	0.05	IN	61.7	85.6	70.7	F
26.	May-26-2022	1.68	IN	60.8	75.4	67.5	F
27.	May-27-2022	0.03	IN	53.4	67.8	59.9	F
28.	May-28-2022	0	IN	51.6	73.2	63	F
29.	May-29-2022	0	IN	59.5	82.9	71.4	F
30.	May-30-2022	0	IN	67.1	88.5	77.7	F
31.	May-31-2022	0	IN	71.6	89.4	79.7	F
32.	Jun-1-2022	0	IN	66	81	74.7	F
33.	Jun-2-2022	0.01	IN	61.3	79.9	69.8	F
34.	Jun-3-2022	0	IN	54.1	84.2	70.5	F
35.	Jun-4-2022	0	IN	51.4	84.2	70.3	F

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36.	Jun-5-2022	0	IN	56.8	85.3	73	F
37.	Jun-6-2022	0	IN	64	85.8	73.8	F
38.	Jun-7-2022	0	IN	62.2	77.9	70	F
39.	Jun-8-2022	0.02	IN	55.2	77.5	64.6	F
40.	Jun-9-2022	0	IN	56.7	78.8	66.7	F
41.	Jun-10-2022	0.1	IN	54	79.7	66	F
42.	Jun-11-2022	0.23	IN	58.5	79.7	68.2	F
43.	Jun-12-2022	0.02	IN	65.8	84	73.8	F
44.	Jun-13-2022	0	IN	68.7	91	79.3	F
45.	Jun-14-2022	0	IN	74.8	95.5	85.8	F
46.	Jun-15-2022	0	IN	75	94.6	85.5	F
47.	Jun-16-2022	0	IN	76.6	97.3	86	F
48.	Jun-17-2022	0	IN	69.1	88.2	79.2	F
49.	Jun-18-2022	0	IN	60.8	82.2	70.3	F
50.	Jun-19-2022	0	IN	52.2	83.8	70.3	F
51.	Jun-20-2022	0	IN	57.4	90.1	75.4	F
52.	Jun-21-2022	0	IN	63.9	96.3	81.7	F
53.	Jun-22-2022	0	IN	72	90.3	81.5	F
54.	Jun-23-2022	0	IN	62.4	89.1	76.6	F
55.	Jun-24-2022	0	IN	59	93	76.6	F
56.	Jun-25-2022	0.01	IN	63.9	82.6	74.3	F
57.	Jun-26-2022	0.22	IN	64.2	81.5	74.1	F
58.	Jun-27-2022	0	IN	54.7	79.3	68.4	F
59.	Jun-28-2022	0	IN	55.2	82.9	69.8	F
60.	Jun-29-2022	0	IN	57.6	87.3	73.9	F
61.	Jun-30-2022	0	IN	61	90.5	77.4	F
62.	Jul-1-2022	0	IN	68.5	90.7	77.5	F
63.	Jul-2-2022	0	IN	66.6	86.4	76.3	F
64.	Jul-3-2022	0	IN	57.6	89.8	75.9	F
65.	Jul-4-2022	0.01	IN	64.6	91.4	79	F
66.	Jul-5-2022	0	IN	77.2	98.2	87.3	F
67.	Jul-6-2022	0	IN	74.3	90	81.9	F
68.	Jul-7-2022	0.05	IN	70.3	84.7	77	F
69.	Jul-8-2022	0.23	IN	70	76.3	72.5	F
70.	Jul-9-2022	0	IN	67.5	84.6	74.1	F
71.	Jul-10-2022	0	IN	57.9	90.7	73.4	F
72.	Jul-11-2022	0	IN	59.5	88	75.9	F
73.	Jul-12-2022	0	IN	67.6	83.8	76.1	F
74.	Jul-13-2022	0	IN	62.8	86.5	75	F
75.	Jul-14-2022	0	IN	57.4	84.9	72.5	F
76.	Jul-15-2022	0.1	IN	58.1	77.4	68.2	F
77.	Jul-16-2022	0.49	IN	69.6	89.4	79	F
78.	Jul-17-2022	0.47	IN	68.9	76.3	72.7	F
79.	Jul-18-2022	0	IN	68.9	87.6	75.6	F
80.	Jul-19-2022	0	IN	64.2	87.4	77	F
81.	Jul-20-2022	0	IN	72	90	80.1	F
82.	Jul-21-2022	0	IN	66.4	88.7	77.7	F
83.	Jul-22-2022	0	IN	68.4	89.6	78.8	F
84.	Jul-23-2022	0	IN	69.8	77.4	73.4	F
85.	Jul-24-2022	0.18	IN	73.6	84.6	78.3	F
86.	Jul-25-2022	0	IN	64.9	83.8	73.9	F
87.	Jul-26-2022	0	IN	65.5	75.4	70	F
88.	Jul-27-2022	0.22	IN	69.3	83.1	74.7	F

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89.	Jul-28-2022	0.09	IN	65.3	85.6	75	F
90.	Jul-29-2022	0	IN	57.9	80.1	69.6	F
91.	Jul-30-2022	0	IN	57	86.4	71.8	F
92.	Jul-31-2022	0	IN	59.7	84.6	73.8	F
93.	Aug-1-2022	0.53	IN	67.5	86.5	76.1	F
94.	Aug-2-2022	0	IN	65.8	85.1	73.8	F
95.	Aug-3-2022	0.58	IN	68.9	90.5	76.8	F
96.	Aug-4-2022	0.01	IN	70	85.5	75.9	F
97.	Aug-5-2022	0	IN	69.1	89.2	77.2	F
98.	Aug-6-2022	0	IN	70.2	89.8	79.5	F
99.	Aug-7-2022	0	IN	73.4	88.7	80.1	F
100.	Aug-8-2022	0.24	IN	69.8	86.9	79.3	F
101.	Aug-9-2022	0.39	IN	64.8	80.1	70.3	F
102.	Aug-10-2022	0	IN	62.2	83.1	72	F
103.	Aug-11-2022	0	IN	59	84	71.2	F
104.	Aug-12-2022	0	IN	57.4	77.5	67.6	F
105.	Aug-13-2022	0	IN	55.2	78.4	68.2	F
106.	Aug-14-2022	0.07	IN	66.2	76.8	70.5	F
107.	Aug-15-2022	0	IN	64.9	79.5	70.5	F
108.	Aug-16-2022	0	IN	59	82.9	71.6	F
109.	Aug-17-2022	0	IN	56.1	83.8	70.3	F
110.	Aug-18-2022	0	IN	55.8	86.2	70.5	F
111.	Aug-19-2022	0	IN	58.8	85.3	72.3	F
112.	Aug-20-2022	0.29	IN	65.1	82.4	71.6	F
113.	Aug-21-2022	0.58	IN	63.3	81.1	70.9	F
114.	Aug-22-2022	0	IN	60.3	84.7	70.2	F
115.	Aug-23-2022	0	IN	55.8	85.3	70	F
116.	Aug-24-2022	0	IN	56.3	87.1	71.4	F
117.	Aug-25-2022	0.25	IN	66.2	80.8	73.6	F
118.	Aug-26-2022	0	IN	62.2	83.1	72.5	F
119.	Aug-27-2022	0	IN	59.2	85.6	72.1	F
120.	Aug-28-2022	0.14	IN	67.5	89.6	77.7	F
121.	Aug-29-2022	2.2	IN	65.8	87.4	74.5	F
122.	Aug-30-2022	0.3	IN	60.8	79.9	71.1	F
123.	Aug-31-2022	0	IN	53.4	81.1	68	F
124.	Sep-1-2022	0	IN	59	84	71.8	F
125.	Sep-2-2022	0	IN	64.2	83.3	73	F
126.	Sep-3-2022	0	IN	66.9	81.7	73.6	F
127.	Sep-4-2022	0	IN	66.6	82	73.2	F
128.	Sep-5-2022	0	IN	66.9	74.1	70	F
129.	Sep-6-2022	0	IN	63.7	82.9	71.2	F
130.	Sep-7-2022	0	IN	59.4	82.4	69.6	F
131.	Sep-8-2022	0	IN	52.9	82.4	68.2	F
132.	Sep-9-2022	0	IN	54.1	84.2	69.1	F
133.	Sep-10-2022	0.05	IN	60.8	88.9	73	F
134.	Sep-11-2022	0.2	IN	59.4	74.1	67.6	F
135.	Sep-12-2022	0.14	IN	51.6	62.8	57.4	F
136.	Sep-13-2022	0	IN	53.1	75	62.2	F
137.	Sep-14-2022	0	IN	52	86.5	67.6	F
138.	Sep-15-2022	0	IN	54.7	86.9	69.3	F
139.	Sep-16-2022	0	IN	57.4	84.6	70.2	F
140.	Sep-17-2022	0	IN	63.3	85.3	72.9	F
141.	Sep-18-2022	0	IN	63.3	86.9	74.3	F

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142.	Sep-19-2022	0.24	IN	62.4	87.4	73.9	F
143.	Sep-20-2022	0	IN	59.2	92.3	75.2	F
144.	Sep-21-2022	0	IN	68.9	91.9	79.5	F
145.	Sep-22-2022	0	IN	46.6	69.6	60.1	F
146.	Sep-23-2022	0	IN	40.5	63.3	53.4	F
147.	Sep-24-2022	0.09	IN	51.6	78.4	63.9	F
148.	Sep-25-2022	0	IN	54.3	71.1	62.4	F
149.	Sep-26-2022	0	IN	44.1	68.4	56.8	F
150.	Sep-27-2022	0	IN	39.6	64.9	50.9	F
151.	Sep-28-2022	0	IN	37.4	66	51.8	F
152.	Sep-29-2022	0	IN	38.7	69.3	53.4	F
153.	Sep-30-2022	0	IN	39.2	70.2	54.9	F
154.	Oct-1-2022	0	IN	43.9	75.4	59.4	F
155.	Oct-2-2022	0	IN	48.6	74.3	59.4	F
156.	Oct-3-2022	0	IN	41.7	72.5	54.5	F
157.	Oct-4-2022	0	IN	34.2	77.5	54.1	F
158.	Oct-5-2022	0	IN	38.1	79.9	58.3	F
159.	Oct-6-2022	0.01	IN	53.4	77.5	63.7	F
160.	Oct-7-2022	0	IN	36.9	61.2	51.4	F
161.	Oct-8-2022	0	IN	30.2	58.8	43.9	F
162.	Oct-9-2022	0	IN	34.5	70.3	52.2	F
163.	Oct-10-2022	0	IN	40.5	77.5	59	F
164.	Oct-11-2022	0.1	IN	54.3	69.8	61.7	F
165.	Oct-12-2022	0.07	IN	43.5	68	59	F
166.	Oct-13-2022	0.07	IN	32.9	59.9	47.7	F
167.	Oct-14-2022	0.22	IN	33.3	65.1	50	F

Application Description

	A
Application Date	May-13-2022
Appl. Start Time	12:40 PM
Appl. Stop Time	1:00 PM
Application Method	SPRAY
Application Timing	PRE
Application Placement	BROSOI
Applied By	J. HAARMANN
Appl. Entry Date	Jun-17-2022
Air Temperature Start, Stop	85, 85 F
% Relative Humidity Start, Stop	46, 46
Wind Velocity+Dir. Start	3 MPH, S
Wind Velocity+Dir. Stop	3 MPH, S
Wind Velocity+Dir. Max	7 MPH, S
Wet Leaves (Y/N)	N, no
Soil Temperature	80 F
Soil Moisture	NORMAL
% Cloud Cover	5
Time to Next Moisture	1.0 DAY
Moisture 1 Week after Appl.	1.87 IN

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Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale	ZEAMX, BCOR
Days after Emergence	-6
Stage Majority, Percent	00, -
Stage Minimum, Percent	00, -
Stage Maximum, Percent	00, -
Height Average	0 IN

Pest Stage At Each Application

	A
Pest 1 Code, Type, Scale	AMBTR, W, BBCH
Stage Majority, Percent	00, -
Stage Minimum, Percent	00, -
Stage Maximum, Percent	00, -
Height Average	0 IN
Density Average	0 IN
Pest 2 Code, Type, Scale	ECHCG, W, BBCH
Stage Majority, Percent	00, -
Stage Minimum, Percent	00, -
Stage Maximum, Percent	00, -
Height Average	0 IN
Density Average	0 IN

Application Equipment

	A
Appl. Equipment	CO2 BACKPACK
Equipment Type	BACSPR
Operation Pressure	20 PSI
Nozzle Model	AIXR
Nozzle Type	FLAFXR
Nozzle TradeName	TEEJET
Nozzle Tip Size, Color	110015, GREEN
Nozzle Spacing	15 IN
Nozzles/Row	8
Boom Length	10 FT
Ground Speed	3 MPH
Carrier	WATER
Application Amount	15 GAL/AC
Mix Size	1.8 L
Propellant	COMCO2

Notes

Context	Date	By	Notes
STATUS	Apr-11-2022	Dr. Bill Johnson	Automatically added by ARM: Trial Status updated to 'S' during trial creation.
STATUS	Jun-17-2022	Dr. Bill Johnson	Automatically added by ARM: Trial Status changed to: E: changed by (EINJOW).
STATUS	Jun-17-2022	Dr. Bill Johnson	Automatically added by ARM: Trial Status updated to 'E' when Initiation Date entered.

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Pest Type		W, Weed	W, Weed		W, Weed	W, Weed
Pest Code		AMBTR	ECHCG		AMBTR	ECHCG
Pest Scientific Name		Ambrosia trifida	Echinochloa cru>		Ambrosia trifida	Echinochloa cru>
Pest Name		Giant ragweed	common barnyard>		Giant ragweed	common barnyard>
Crop Type, Code		C, ZEAMX	C, ZEAMX	C, ZEAMX	C, ZEAMX	C, ZEAMX
BBCH Scale		BCOR	BCOR	BCOR	BCOR	BCOR
Crop Scientific Name		Zea mays	Zea mays	Zea mays	Zea mays	Zea mays
Crop Name		Corn	Corn	Corn	Corn	Corn
Description		JH			JH	
Rating Date		May-27-2022	May-27-2022	May-27-2022	Jun-10-2022	Jun-10-2022
Part Rated		PLOT, P	PLOT, P	PLOT, C	PLOT, P	PLOT, P
Rating Type		CONTRO	CONTRO	PHYGEN	CONTRO	CONTRO
Rating Unit/Min/Max		%, 0, 100	%, 0, 100	%, 0, 100	%, 0, 100	%, 0, 100
Sample Size						
Number of Subsamples		0	0	0	0	0
Assessed By		J. HAARMANN	J. HAARMANN	J. HAARMANN	J. HAARMANN	J. HAARMANN
Data Entry Date		Jul-12-2022	Jul-12-2022	Jul-12-2022	Jul-12-2022	Jul-12-2022
Rating Timing		A1	A1	A1	A2	A2
Days After First/Last Applic.		14, 14	14, 14	14, 14	28, 28	28, 28
Trt-Eval Interval		14 DA-A	14 DA-A	14 DA-A	28 DA-A	28 DA-A
Plant-Eval Interval		15 DP-1	15 DP-1	15 DP-1	29 DP-1	29 DP-1
Days After Emergence		8 DE-1	8 DE-1	8 DE-1	22 DE-1	22 DE-1
ARM Action Codes						ER3
Number of Decimals		0	0	0	0	0
Trt No.	Treatment Name	Rate Rate Unit Appl Code	1	2	3	4	5
1	ACURON	3 qt/a A	88 -	100 -	0 -	98 -	100 -
2	LEXAR EZ	3.5 qt/a A	84 -	100 -	0 -	91 -	100 -
3	RESICORE	2.75 qt/a A	93 -	100 -	0 -	94 -	99 -
	AATREX	0.75 qt/a A					
4	TRIVOLT	20 fl oz/a A	88 -	100 -	0 -	91 -	97 -
	AATREX	0.75 qt/a A					
5	MAVERICK	32 fl oz/a A	93 -	100 -	0 -	97 -	100 -
	AATREX	0.75 qt/a A					
6	HARNESS MAX	75 fl oz/a A	89 -	100 -	0 -	93 -	100 -
	AATREX	0.75 qt/a A					
7	NONTREATED		0	0	0	0	0
LSD P=.05			7.0	.	.	5.6	4.5
Standard Deviation			4.6	0.0	0.0	3.7	2.4
CV			5.19	0.0	0.0	3.93	2.47
Levene's F^			0.462	.	.	3.064*	0.543
Levene's Prob(F)			0.799	.	.	0.036*	0.741
Shapiro-Wilk^			0.9648	.	.	0.9624	0.7604*
P(Shapiro-Wilk)^			0.5411	.	.	0.4885	0.0*
Skewness^			-0.3292	.	.	-0.4244	-2.1145*
P(Skewness)^			0.5179	.	.	0.4059	0.0003*
Kurtosis^			-0.3854	.	.	0.6956	7.9492*
P(Kurtosis)^			0.696	.	.	0.4824	0.0*
Replicate F			1.274	0.000	0.000	0.790	0.778
Replicate Prob(F)			0.3190	1.0000	1.0000	0.5182	0.4853
Treatment F			2.264	0.000	0.000	2.712	0.889
Treatment Prob(F)			0.1011	1.0000	1.0000	0.0613	0.5233

Means followed by same letter or symbol do not significantly differ (P=.05, LSD).
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.
Untreated treatment(s) 7 excluded from analysis.
Excluded replicate 3 in column 5
Could not calculate LSD (% mean diff) for columns 2,3,6 because error mean square = 0.
^Calculated from residual.

Purdue University Weed Science

Acuron vs. new competitors

Trial ID: 22S-TPAC-CORN-03 Cooperator Trial ID:
Protocol ID: 22S-TPAC-CORN-03 Location: TPAC Trial Year: 2022
Project ID: H006BIAD-2022US Project ID 2: Project ID 3:
Study Director: Dr. Bill Johnson Sponsor Contact: Chad Threewits - Syngenta
Investigator (Creator): Dr. Bill Johnson

Pest Type		W, Weed	W, Weed	W, Weed	W, Weed	
Pest Code		AMBTR	ECHCG	AMBTR	ECHCG	
Pest Scientific Name		Ambrosia trifida	Echinochloa cru>	Ambrosia trifida	Echinochloa cru>	
Pest Name		Giant ragweed	common barnyard>	Giant ragweed	common barnyard>	
Crop Type, Code	C, ZEAMX	C, ZEAMX	C, ZEAMX	C, ZEAMX	C, ZEAMX	
BBCH Scale	BCOR	BCOR	BCOR	BCOR	BCOR	
Crop Scientific Name	Zea mays	Zea mays	Zea mays	Zea mays	Zea mays	
Crop Name	Corn	Corn	Corn	Corn	Corn	
Description		JH		JH		
Rating Date	Jun-10-2022	Jun-24-2022	Jun-24-2022	Jul-7-2022	Jul-7-2022	
Part Rated	PLOT, C	PLOT, P	PLOT, P	PLOT, P	PLOT, P	
Rating Type	PHYGEN	CONTRO	CONTRO	CONTRO	CONTRO	
Rating Unit/Min/Max	%, 0, 100	%, 0, 100	%, 0, 100	%, 0, 100	%, 0, 100	
Sample Size						
Number of Subsamples	0	0	0	0	0	
Assessed By	J. HAARMANN	J. HAARMANN	J. HAARMANN	J. HAARMANN	J. HAARMANN	
Data Entry Date	Jul-12-2022	Jul-12-2022	Jul-12-2022	Jul-12-2022	Jul-12-2022	
Rating Timing	A2	A3	A3	A4	A4	
Days After First/Last Applic.	28, 28	42, 42	42, 42	55, 55	55, 55	
Trt-Eval Interval	28 DA-A	42 DA-A	42 DA-A	55 DA-A	55 DA-A	
Plant-Eval Interval	29 DP-1	43 DP-1	43 DP-1	56 DP-1	56 DP-1	
Days After Emergence	22 DE-1	36 DE-1	36 DE-1	49 DE-1	49 DE-1	
ARM Action Codes						
Number of Decimals	0	0	0	0	0	

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	6	7	8	9	10
1	ACURON	3	qt/a	A	0 -	97 a	98 -	93 a	96 -
2	LEXAR EZ	3.5	qt/a	A	0 -	83 cd	99 -	78 bc	98 -
3	RESICORE	2.75	qt/a	A	0 -	85 bc	95 -	85 b	93 -
	AATREX	0.75	qt/a	A					
4	TRIVOLT	20	fl oz/a	A	0 -	81 cd	96 -	78 bc	94 -
	AATREX	0.75	qt/a	A					
5	MAVERICK	32	fl oz/a	A	0 -	91 ab	96 -	85 b	88 -
	AATREX	0.75	qt/a	A					
6	HARNESS MAX	75	fl oz/a	A	0 -	78 d	98 -	75 c	95 -
	AATREX	0.75	qt/a	A					
7	NONTREATED				0	0	0	0	0

LSD P=.05	.	6.2	4.3	7.6	9.4
Standard Deviation	0.0	4.1	2.9	5.1	6.2
CV	0.0	4.84	2.98	6.17	6.66
Levene's F^	.	1.334	0.647	0.821	0.991
Levene's Prob(F)	.	0.295	0.667	0.551	0.45
Shapiro-Wilk^	.	0.9481	0.9451	0.9375	0.9233
P(Shapiro-Wilk)^	.	0.246	0.2117	0.1437	0.0692
Skewness^	.	0.0493	-0.5683	0.9492	-0.912
P(Skewness)^	.	0.9225	0.2686	0.0709	0.0819
Kurtosis^	.	-1.1568	-0.5266	2.178*	1.3343
P(Kurtosis)^	.	0.2472	0.594	0.0354*	0.184
Replicate F	0.000	7.312	3.491	3.075	0.574
Replicate Prob(F)	1.0000	0.0030	0.0422	0.0598	0.6411
Treatment F	0.000	11.169	0.909	6.938	1.055
Treatment Prob(F)	1.0000	0.0001	0.5009	0.0015	0.4228

Means followed by same letter or symbol do not significantly differ (P=.05, LSD).
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.
Untreated treatment(s) 7 excluded from analysis.
Excluded replicate 3 in column 5
Could not calculate LSD (% mean diff) for columns 2,3,6 because error mean square = 0.
^Calculated from residual.

Purdue University Weed Science

Acuron vs. new competitors

Trial ID: 22S-TPAC-CORN-03 Cooperator Trial ID:
Protocol ID: 22S-TPAC-CORN-03 Location: TPAC Trial Year: 2022
Project ID: H006BIAD-2022US Project ID 2: Project ID 3:
Study Director: Dr. Bill Johnson Sponsor Contact: Chad Threewits - Syngenta
Investigator (Creator): Dr. Bill Johnson

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	11	12	13
	Pest Type						
	Pest Code						
	Pest Scientific Name						
	Pest Name						
	Crop Type, Code				C, ZEAMX	C, ZEAMX	C, ZEAMX
	BBCH Scale				BCOR	BCOR	BCOR
	Crop Scientific Name				Zea mays	Zea mays	Zea mays
	Crop Name				Corn	Corn	Corn
	Description						
	Rating Date				Oct-7-2022	Oct-7-2022	Oct-7-2022
	Part Rated				PLOT, C	PLOT, C	PLOT, C
	Rating Type				YIELD	MOICON	YIELD
	Rating Unit/Min/Max				lb/plot, -, -	%, 0, 100	BU, -, -
	Sample Size				1 PLOT		1 A
	Number of Subsamples				1	1	1
	Assessed By				J. HAARMANN	J. HAARMANN	J. HAARMANN
	Data Entry Date				Oct-19-2022	Oct-19-2022	
	Rating Timing						
	Days After First/Last Applic.				147, 147	147, 147	147, 147
	Trt-Eval Interval				147 DA-A	147 DA-A	147 DA-A
	Plant-Eval Interval				148 DP-1	148 DP-1	148 DP-1
	Days After Emergence				141 DE-1	141 DE-1	141 DE-1
	ARM Action Codes						TY1
	Number of Decimals						1
1	ACURON	3	qt/a	A	36.030 a	18.85 -	199.4 a
2	LEXAR EZ	3.5	qt/a	A	31.523 bc	18.45 -	175.3 bc
3	RESICORE	2.75	qt/a	A	33.388 ab	18.75 -	185.0 ab
	AATREX	0.75	qt/a	A			
4	TRIVOLT	20	fl oz/a	A	28.208 d	18.50 -	156.7 d
	AATREX	0.75	qt/a	A			
5	MAVERICK	32	fl oz/a	A	35.183 a	19.05 -	194.2 a
	AATREX	0.75	qt/a	A			
6	HARNESS MAX	75	fl oz/a	A	29.775 cd	18.60 -	165.2 cd
	AATREX	0.75	qt/a	A			
7	NONTREATED				2.625	16.35	14.9
	LSD P=.05				3.1090	0.947	16.69
	Standard Deviation				2.0628	0.628	11.08
	CV				6.38	3.36	6.18
	Levene's F^				0.853	1.993	0.579
	Levene's Prob(F)				0.531	0.129	0.716
	Shapiro-Wilk^				0.9564	0.9527	0.9433
	P(Shapiro-Wilk)^				0.3696	0.309	0.1933
	Skewness^				-0.5747	0.3892	-0.6668
	P(Skewness)^				0.2634	0.4455	0.1965
	Kurtosis^				-0.337	1.2534	-0.3143
	P(Kurtosis)^				0.7325	0.211	0.7499
	Replicate F				7.127	1.744	7.399
	Replicate Prob(F)				0.0034	0.2010	0.0029
	Treatment F				8.858	0.527	9.017
	Treatment Prob(F)				0.0004	0.7522	0.0004

Means followed by same letter or symbol do not significantly differ (P=.05, LSD).
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.
Untreated treatment(s) 7 excluded from analysis.
Excluded replicate 3 in column 5
Could not calculate LSD (% mean diff) for columns 2,3,6 because error mean square = 0.
^Calculated from residual.

Purdue University Weed Science

Acuron vs. new competitors

Trial ID: 22S-TPAC-CORN-03 Cooperator Trial ID:
Protocol ID: 22S-TPAC-CORN-03 Location: TPAC Trial Year: 2022
Project ID: H006BIAD-2022US Project ID 2: Project ID 3:
Study Director: Dr. Bill Johnson Sponsor Contact: Chad Threewits - Syngenta
Investigator (Creator): Dr. Bill Johnson

Pest Type
W, Weed = Weed or volunteer crop
Pest Code
AMBTR, Ambrosia trifida, Giant ragweed = US
ECHCG, Echinochloa crus-galli, common barnyardgrass = US
Crop Type, Code
C = EPPO species (Bayer) codes
ZEAMX, BCOR, Zea mays, Corn = US
Part Rated
PLOT = plot
P = Pest is Part Rated
C = Crop is Part Rated
Rating Type
CONTRO = control / burndown or knockdown
PHYGEN = phytotoxicity - general / injury
YIELD = yield
MOICON = moisture content
Rating Unit/Min/Max
%, 0, 100 = percent
lb/plot, , = pounds per plot
BU, , = bushel

PLOT = total plot
A = acre
Rating Timing
A1 = 1st Assessment According to Trial Schedule
A2 = 2nd Assessment According to trial Schedule
A3 = 3rd Assessment According to Trial Schedule
A4 = 4th Assessment According to Trial Schedule
Plant-Eval Interval
15 DP-1 = 1 ZEAMX May-12-2022
29 DP-1 = 1 ZEAMX May-12-2022
43 DP-1 = 1 ZEAMX May-12-2022
56 DP-1 = 1 ZEAMX May-12-2022
148 DP-1 = 1 ZEAMX May-12-2022
ARM Action Codes
ER3 = Excluded replicate 3
TY1 = 5.76190476*[11]*(100-[12])/84.5

Trt No.	Type	Treatment Name	Form Conc	Form Unit	Form Type	Rate	Rate Unit	Appl Code	Rep 1	2	3	4	Notes
1	HERB	ACURON	3.44	LBA/GAL	ZC	3	qt/a	A	101	401	503	702	
2	HERB	LEXAR EZ	3.7	LBA/GAL	ZC	3.5	qt/a	A	102	301	602	803	
3	HERB	RESICORE	3.29	LBA/GAL	SC	2.75	qt/a	A	103	302	601	801	
	HERB	AATREX	4	LBA/GAL	SC	0.75	qt/a	A					
4	HERB	TRIVOLT	3.65	LBA/GAL	SC	20	fl oz/a	A	104	403	501	704	
	HERB	AATREX	4	LBA/GAL	SC	0.75	qt/a	A					
5	HERB	MAVERICK	2.04	LBA/GAL	SC	32	fl oz/a	A	201	303	504	703	
	HERB	AATREX	4	LBA/GAL	SC	0.75	qt/a	A					
6	HERB	HARNESS MAX	3.85	LBA/GAL	SC	75	fl oz/a	A	202	304	502	701	
	HERB	AATREX	4	LBA/GAL	SC	0.75	qt/a	A					
7	CHK	NONTREATED							203	402	603	802	

Sort Order: Replicate 1